

EIC  
English translation

DERWENT-ACC-NO: 2001-055316

DERWENT-WEEK: 200107

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TITLE: Semiconductor device has arbiter to  
perform approval of data forwarding between memory and  
input-output device in response to demand from CPU and  
direct memory access channels in input-output interfaces

PATENT-ASSIGNEE: HITACHI LTD[HITA] , HITACHI MICON SYSTEM  
KK[HITAN]

PRIORITY-DATA: 1999JP-0125595 (May 6, 1999)

PATENT-FAMILY:

PUB-NO	PAGES	PUB-DATE	
LANGUAGE		MAIN-IPC	
JP 2000315186 A		November 14, 2000	N/A
019	G06F 013/28	11/09/2000	

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-DESCRIPTOR	APPL-NO
JP2000315186A		N/A	
1999JP-0125595		May 6, 1999	

INT-CL (IPC): G06F013/12, G06F013/18 , G06F013/28 ,  
G06F013/362

ABSTRACTED-PUB-NO: JP2000315186A

BASIC-ABSTRACT:

NOVELTY - Input-output (I/O) interfaces (13-15) with CPU  
interface (11) in  
bridge chip (1) are coupled to DRAM interface through  
internal bus (10). Each  
I/O interface has buffers (21-23) and direct memory access

channels (DMAC)  
(26-28). Arbiter (17) between CPU and DRAM interfaces  
approves data forwarding  
between DRAM (3) and I/O device (4) based on demand from  
CPU (2) through CPU  
interface and from DMAC.

USE - Semiconductor device with efficient multimedia data  
forwarding between  
memory and input-output device used in domestic use  
personal computer,  
audio-video apparatus.

ADVANTAGE - Performs efficient data forwarding by provision  
of independent  
direct memory access channels in each input-output  
interface.

DESCRIPTION OF DRAWING(S) - The figure shows the  
semiconductor device.

Bridge chip 1

CPU 2

Internal bus 10

CPU Interface 11

Input-output interfaces 13-15

Arbiter 17

Buffers 21-23

DMAC 26-28

CHOSEN-DRAWING: Dwg.1/31

TITLE-TERMS: SEMICONDUCTOR DEVICE ARBITER PERFORMANCE  
APPROVE DATA FORWARDING  
MEMORY INPUT OUTPUT DEVICE RESPOND DEMAND CPU  
DIRECT MEMORY ACCESS  
CHANNEL INPUT OUTPUT INTERFACE

DERWENT-CLASS: T01

EPI-CODES: T01-H05B1; T01-H05B2; T01-H05B3;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N2001-042821